

Application No. 10/516,387
Paper Dated: November 3, 2009
In Reply to USPTO Correspondence of May 4, 2009
Attorney Docket No. 4623-045790

REMARKS

This application has been amended. In particular, the time period of leach liquor application in claims 1 and 21 has been amended to read “less than 4 hours in each 24 hour period” in order to further clarify the claimed time period. In addition, the parentheses in claims 1 and 21 have been removed to address the 35 U.S.C. §112, second paragraph rejection. Claim 22 has been added by this amendment, and this claim finds support in original claim 1, as well as on page 8 of the application as filed. Thus, no new matter has been added. Claims 1-7, 10-14 and 21-22 are currently pending, of which claims 1, 21 and 22 are in independent form.

Clarification of the Interview Summary

Applicants received an Interview Summary mailed March 13, 2009. The Interview Summary asserts “The applicant argues that Brown (US 4,960,584) does not teach 1) the claimed leach solution supplying time of less than 4 minutes...” (emphasis supplied). Applicants wish to clarify that, rather than “4 minutes” the record should state “4 hours,” consistent with the language in the claims. Further, Applicants wish to clarify that the interview occurred on March 5, 2009 rather than February 5, 2009, which date is indicated in the Interview Summary. Applicants provide these points simply to clarify the record, and the errors do not appear to have had any impact on the subsequent Office Action issued May 4, 2009.

Rejection Under 35 U.S.C. §112, Second Paragraph

Claims 1-7, 10-14 and 21 stand rejected under 35 U.S.C. §112, second paragraph because the inclusion of the parentheses in claims 1 and 21 is perceived to make the claims unclear. Claims 1 and 21 have been amended to remove the parentheses which is presumed to be sufficient to overcome this rejection.

Rejection Under 35 U.S.C. §103(a)

Claims 1-7, 10-14 and 21 are rejected under 35 U.S.C. §103(a) for obviousness over U.S. Patent No. 4,960,584 to Brown. In view of the foregoing amendments to the claims and following remarks, this rejection is respectfully traversed.

Brown is directed to a system for supplying a heap leaching solution to a bed of crushed, metal-laden ore. The system is comprised of a mainline pipe (14) for delivering the solution to the system, a plurality of header pipes (15) for distributing the solution to a separate series of tubes (16), and a series of tubes (16) which have a plurality of spaced emitters for directly emitting the solution into the ore bed. (See Col. 2, line 66 – Col. 3, line 5.) The tubes (16) are disposed parallel to one another and the emitters disposed on parallel tubes are staggered with respect to one another to aid in the substantially uniform saturation of the bed. (See Col. 4, line 52-64.) The tubes (16) and emitters (17) appear to remain stationary since the layout (i.e., multiple parallel tubes and staggered emitters) allows for substantially uniform saturation of the bed without any disclosed movement of the system components. In addition, the relatively complex layout, with the mainline pipe connected to the header pipes which are connected to the parallel tubes, does not appear to be amenable to movement of the tubes across the top surface of the bed.

With respect to the time for application of the leaching solution, Brown suggests that the time which the leaching solution should be in contact with the bed may be from four hours to 60-days with many applications requiring from seven to 45-days. (See Col. 5, lines 2-13.) This appears to be a total contact time, and Brown does not suggest breaking up the total application time period into multiple, shorter contact periods. Instead, Brown appears to teach a single application period, which may result in a contact time of from four hours to 60-days.

Claims 1 and 21 define a method that includes a step of supplying leach liquor onto a top surface of a section of heap where the leach liquor is supplied for a relatively short time period of less than four hours in each 24-hour period. This concept, wherein the total supply time of the leach liquor can be broken up into relatively short periods of less than four hours for each 24-hour period, is not disclosed or suggested in Brown. Instead, as mentioned above, Brown appears limited to a method in which the solution is applied to the ore over a single, continuous period.

Claims 3 and 21 define a method as including supplying the leach liquor as a downwardly flowing curtain and then moving the curtain along the length of the section of the heap or the entire length of the heap continuously or in a series of steps. Brown neither discloses

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nor suggests such a moving curtain. As mentioned above, the parallel tubes and staggered emitters in Brown are purported to allow for complete saturation of the ore bed. Accordingly, Brown need not provide a downwardly flowing curtain that moves along the heap since adequate saturation occurs due to the arrangement of the emitters. Furthermore, the complicated arrangement of the system in Brown, with a mainline pipe connected to header pipes which are subsequently connected to a series of parallel tubes, would be impractical, if not impossible, to move along the heap continuously or in a series of steps. Instead, the system of Brown is a fixed arrangement. The Office Action asserts generally that the umbrella-shaped pattern of Brown is a flowing curtain with the curtain being moved along the length of the section of heap in a series of steps. (See Office Action, page 3.) However, the Office Action does not point to any particular passage in Brown that supports this proposition. While it is true that Brown discloses emitters that project leach solution in an umbrella-shaped pattern, the emitters are not disclosed as moving relative to the ore bed. Instead, as mentioned above, the staggered arrangement of the emitters provides Brown's system with the necessary coverage to supply leach solution to the bed. Absent some supporting evidence, it is improper to assert Brown teaches or suggests a method in which a curtain of downwardly flowing leach liquor is moved along the heap bed continuously or in a series of steps.

Thus, claims 1 and 21, and the claims depending therefrom, are patentable over Brown. Accordingly, reconsideration of the outstanding rejection of claims 1-7, 10-14 and 21 under 35 U.S.C. §103(a) for obviousness over Brown should be reconsidered and withdrawn.

New Claim 22 is Patentable Over Brown

Claim 22 has been added by this amendment. Claim 22 is similar to claim 1 in that it requires supplying leach liquor onto a top surface for a time period of less than 4 hours in each 24-hour period. However, the method of claim 22 further requires that, after supplying the leach liquor to the first section of heap, step (a) is repeated at a second portion of the heap. One important consequence of this section-by-section approach is that it allows the flow rate (which according to step (a) is sufficient to saturate the section of heap) to be selected based on the particular section of heap which is being treated at that particular time. Subsequent sections can

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then be treated at different flow rates.

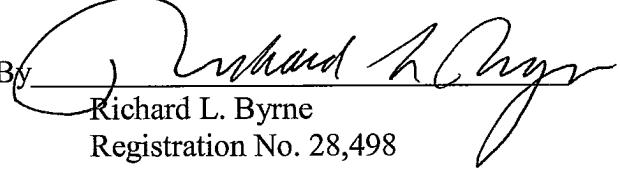
This additional step of repeating the leach liquor supply at a second section of heap is not disclosed or suggested in Brown. Instead, Brown teaches application of the leach solution across the entire bed in a single application and at a uniform rate. As discussed above, the system of Brown includes a series of tubes and staggered emitters which aid in the "substantially uniform saturation of ore bed 11 with the solution." (See Col. 4, lines 60-64.) This appears to be a whole heap approach, which would be inconsistent with claim 22, and particularly the feature of claim 22 in which a first section of the heap is supplied with leach liquor and then, after the leach liquor is supplied to the first section, the supply step is repeated at a second section of the heap.

Thus, claim 22 is not anticipated by or obvious over Brown.

CONCLUSION

For all the foregoing reasons, Applicants submit that the pending claims are patentable over the cited documents of record and are in condition for allowance. Accordingly, reconsideration of the outstanding rejection and allowance of pending claims 1-7, 10-14 and 21-22 are respectfully requested.

Respectfully submitted,
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